## Supplementary

**Table S1** The proportion of patients using immunosuppressants in different post-transplant periods

| Proportion of patients | Post-transplant time | | |
|---|---|---|---|
| | ≤6 months | >6 and ≤12 months | >12 months |
| In use | 30 (61%) | 8 (36%) | 3 (4%) |
| Decrease in use | 13 (27%) | 2 (9%) | 0% |
| Overall use* | 43 (88%) | 10 (45%) | 3 (4%) |
| Out of use | 6 (12%) | 12 (55%) | 66 (96%) |

*, including in use and decrease in use.

**Table S2** Clinical characteristics of the patients ≤10 and >10 years of age

| Characteristics | Pediatric allo-HSCT patients (n=126) | | P |
|---|---|---|---|
| | ≤10 years (n=79) | >10 years (n=47) | |
| Age (years), median [IQR] | 5.9 [3.5–7.2] | 13.5 [11.2–14.9] | <0.001 |
| Gender, n [%] | | | 0.09 |
| Male | 54 [68] | 25 [53] | |
| Female | 25 [32] | 22 [47] | |
| Underlying hematological disease, n [%] | | | 0.01 |
| Malignant diseases of hematopoietic system | 41 [52] | 30 [64] | |
| Nonmalignant diseases of the hematopoietic system | 17 [21] | 15 [32] | |
| Inherited metabolic diseases | 11 [14] | 2 [4] | |
| Primary immunodeficiency disease | 10 [13] | 0 | |
| Conditioning regimen, n [%] | | | 0.76 |
| Chemotherapy with TBI | 18 [23] | 14 [30] | |
| Chemotherapy without TBI | 61 [77] | 33 [70] | |
| Donor type, n [%] | | | 0.02 |
| MMUD/MUD | 25 [31] | 19 [41] | |
| MMRD | 25 [32] | 18 [38] | |
| MRD | 14 [18] | 10 [21] | |
| UCB | 15 [19] | 0 | |
| Source of stem cells, n [%] | | | 0.001 |
| PBSC | 64 [81] | 47 [100] | |
| UCB | 15 [19] | 0 | |
| GvHD prophylaxis, n [%] | | | 0.98 |
| IST with ATG | 64 [81] | 38 [81] | |
| IST without ATG | 15 [19] | 9 [19] | |
| Transplant history, n [%] | | | 0.79 |
| ≤6 months post-transplant | 31 [39] | 18 [38] | |
| >6 and ≤12 months post-transplant | 15 [19] | 7 [15] | |
| >12 months post-transplant | 33 [42] | 22 [47] | |
| Post-transplant interval time (months), median [IQR] | | | |
| Total | 6.6 [5.8–22.6] | 11.9 [3.6–24.3] | 0.53 |
| ≤6 months | 4.9 [3.2–5.9] | 3.3 [3.2–4.9] | 0.31 |
| >6 and ≤12 months | 6.5 [6.3–10.5] | 7.8 [6.5–11.8] | 0.36 |
| >12 months | 23.8 [19.4–29.7] | 24.5 [21.9–52.7] | 0.11 |
| Immunosuppressant usage status at inclusion, n [%] | | | 0.68 |
| Out of use | 45 [57] | 24 [51] | |
| Decrease in use | 8 [10] | 7 [15] | |
| In use | 26 [33] | 16 [34] | |
| Type of immunosuppressants in use or decrease in use, n [%] | | | 0.84 |
| Cyclosporin | 29 [85]# | 18 [78]# | |
| Mycophenolate mofetil | 3 [9]# | 3 [13]# | |
| Methylprednisolone | 5 [15]# | 1 [4]# | |
| Sirolimus | 2 [6]# | 2 [9]# | |
| Tacrolimus | 2 [6]# | 1 [4]# | |
| Ruxolitinib | 3 [9]# | 1 [4]# | |
| IVIG history, n [%] | | | 0.84 |
| No history | 14 [18] | 9 [19] | |
| Infusion | 65 [82] | 38 [81] | |
| Time since last infusion (months), median [IQR] | 8.3 [2.9–20.7] | 6.7 [0.5–21.1] | 0.92 |
| GvHD history, n [%] | | | 0.64 |
| Acute GvHD | 33 [42] | 23 [49] | |
| I | 17 | 11 | |
| II | 14 | 9 | |
| IV | 2 | 3 | |
| Chronic GvHD | 18 [23] | 10 [21] | |
| GvHD status at inclusion, n [%] | | | 0.28 |
| No history | 34 [43] | 20 [43] | |
| Resolved GvHD | 41 [52] | 27 [57] | |
| Active GvHD (acute or chronic) | 4 [5] | 0 | |

#, the proportion was based on the 34 population of ≤10 years and 23 population of >10 years including in use and decrease in use group.


https://dx.doi.org/10.21037/tp-2025-80

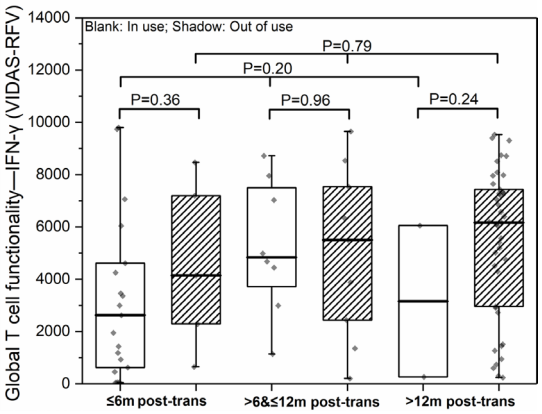


**Figure S1** The boxplots represented the global T cell functionality in allo-HSCT children with (blank) and without (twill) immunosuppressant medication in different post-transplant periods (≤6 months post-trans, >6 and ≤12 months post-trans and >12 months post-trans).

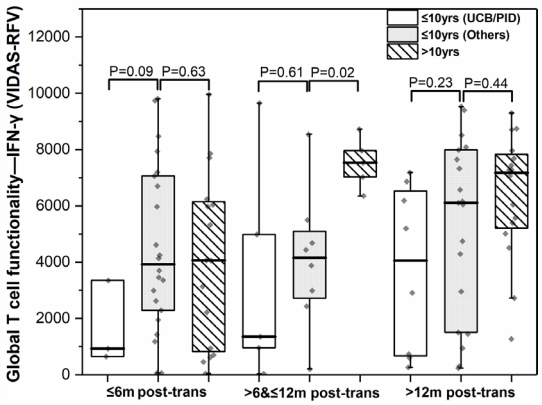


**Figure S2** The boxplots represented the global T cell functionality in pediatric allo-HSCT patients in different post-transplant periods (≤6 months post-trans, >6 and ≤12 months post-trans and >12 months post-trans). The patients were divided into those UCB/PID ≤10 years old (blank), the others ≤10 years (shadow) and those >10 years (twill).


https://dx.doi.org/10.21037/tp-2025-80